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SIMPSON & CURTIN •• INTERIM REPORT

EVALUATION OF ALTERNATIVE SERVICE IMPROVEMENTS PROPOSED ROUTES 6a

TWIN CITIES AREA METROPOLITAN TRANSIT COMMISSION

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EVALUATION OF ALTERNATIVE SERVICE IMPROVEMENTS:

Proposed Routes

Prepared for

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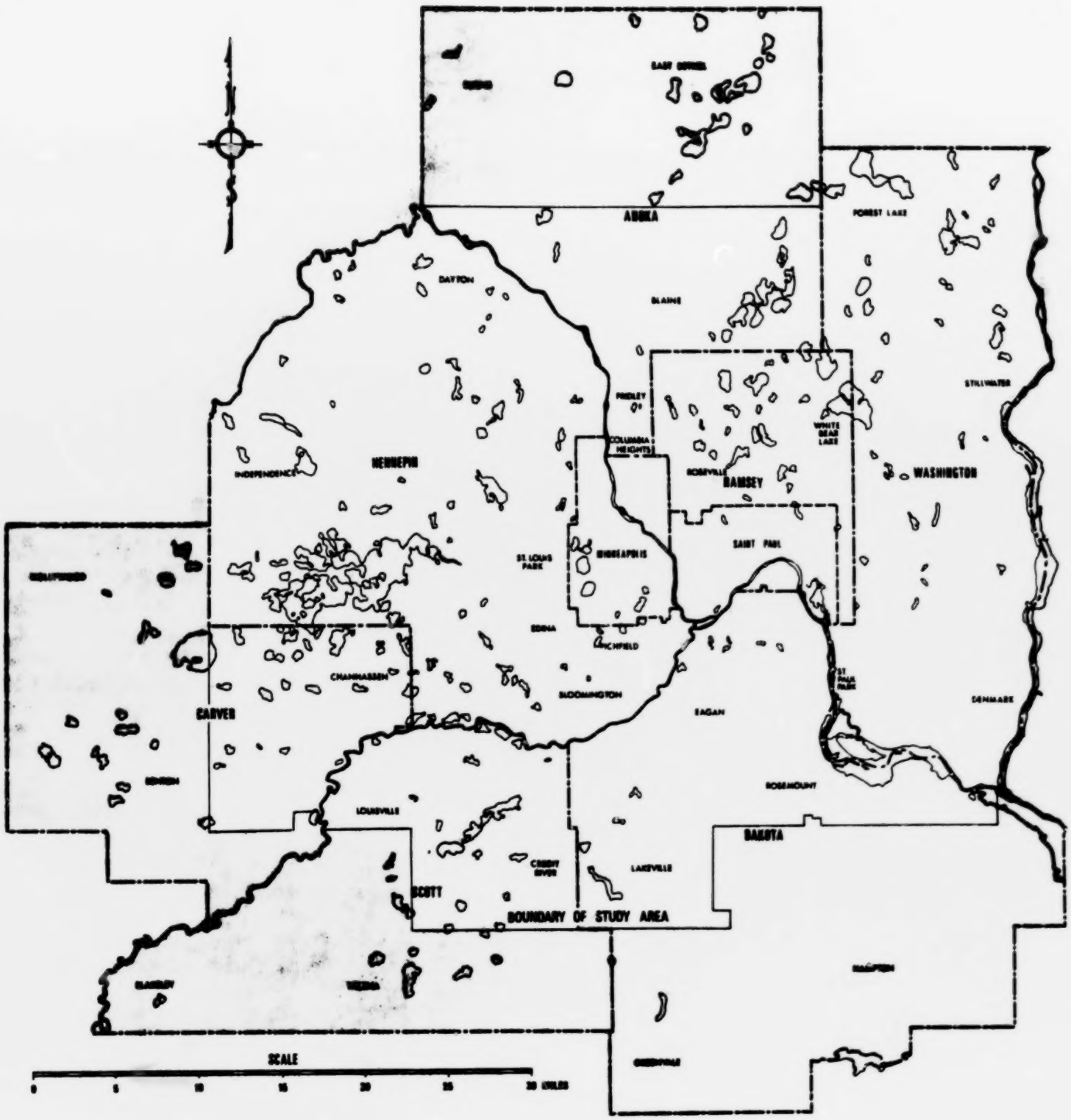


THE STUDY AREA

TWIN CITIES METROPOLITAN AREA

INTRODUCTION

This special appendix to Interim Report No. 6 - "Evaluation of Alternative Service Improvements," presents detailed descriptions of the various route revisions and new route proposals which have been evaluated and reported upon in that publication. In summary, these route proposals include:

- revisions to 13 of the 18 regular service routes operated by Twin City Lines' Minneapolis Transit Company
- revisions to 11 of the 13 regular service routes operated by Twin City Lines' St. Paul Transit Company
- revisions to one of the two intercity routes now operated by Twin City Lines
- revisions to three of the seven suburban transit operations and discontinuance of a fourth - - South and West St. Paul Transit Company (with Twin City Lines, Inc. providing service in the area now served by that operation)

The proposals for five of the 25 "revised" routes actually include no route change and only suggest the initiation of peak-hour express service.

In addition to the proposed revisions to existing routes, the appendix also includes a detailed description of each of the four completely new routes which have been evaluated.

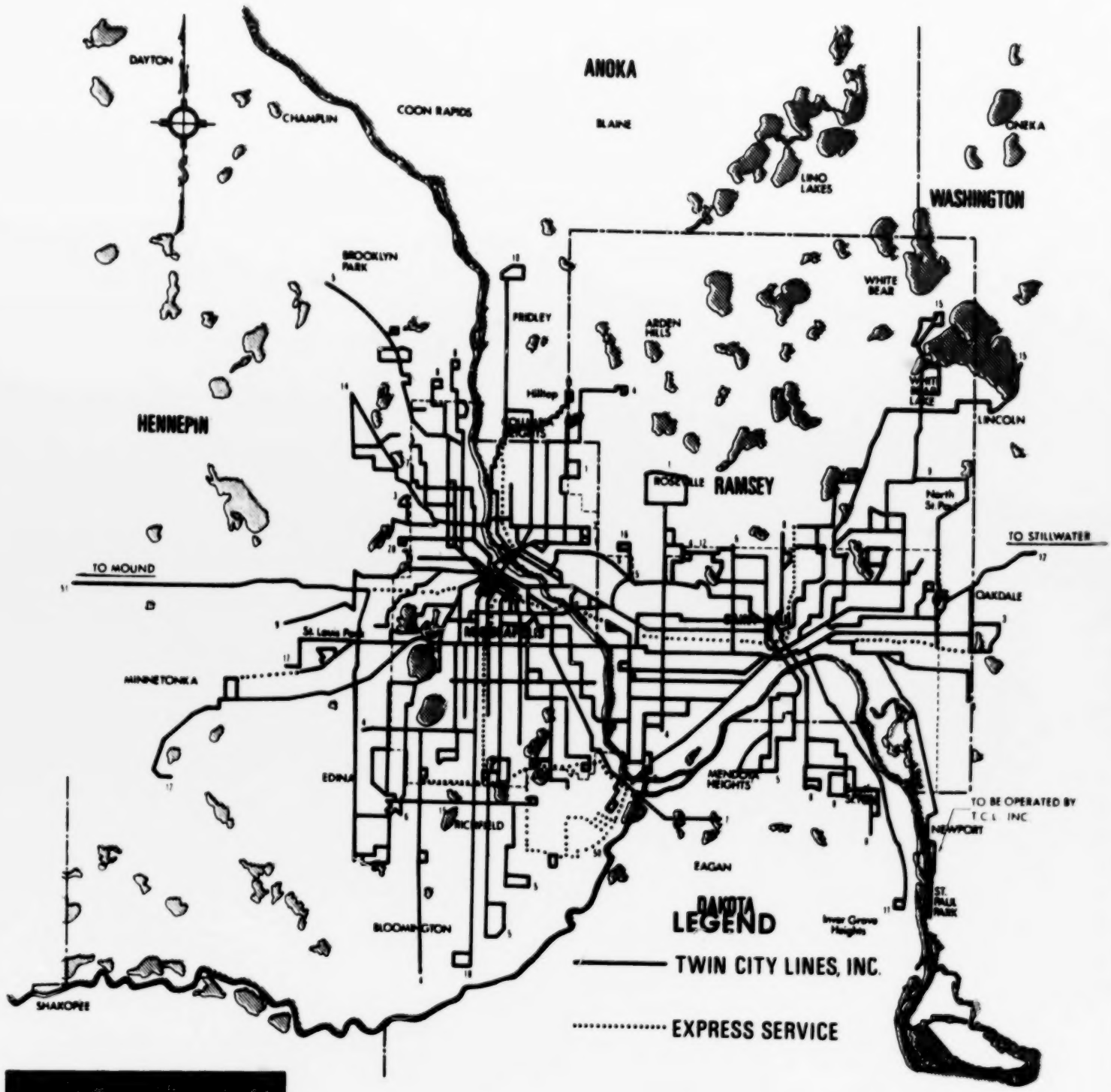
Various route statistics including one-way route miles, annual vehicle miles and hours of service, average route speed, and patronage, revenue and cost data, are also presented for each route. These data have been computed for two conditions:

- present route and schedule operation (1968)
- route and schedule operation - 'test system' (proposed)

It is important to note that even though each route was examined on an individual basis, it was necessary, in arriving at patronage and revenue estimates, to consider each route as part of an overall system. Therefore, the data for "proposed" operation are based upon the premise that all route revisions and proposals are put into effect. This assumption should be kept in mind in making use of the various route comparisons.

Statistics are presented only for the regular service routes of Twin City Lines, Inc. The three lines operated by Twin City Lines under contract with the Metropolitan Transit Commission -- the Mound-Wayzata line and the two airport routes -- are not included in this report (although they were included in the patronage and revenue analysis). These lines are being continually examined and updated by MTC staff and consultants and at this time there are no major changes or proposals concerning these three lines.

Description of proposed route revisions to the suburban transit operations is included in this report. The effect of the various revisions on suburban operators is discussed in Interim Report No. 6.



TEST TRANSIT SYSTEM

ROUTE PROPOSALS

TWIN CITY LINES, INC.

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TWIN CITY LINES, INC.: PROPOSED ROUTE REVISIONS
ST. PAUL DIVISION: ROUTE 1, HAR-MAR EXPRESS

Proposed Revisions

- Extend the route north from Har-Mar to Highway 36 and turn east to Hamline Avenue. Turn north at this point to County Road 6 and turn west to Fairview Avenue and then south to Highway 36 and thence east to Snelling Avenue and south along present route. The route would provide local service north of Highway 36 and also serve the new shopping center north of Highway 36.

ROUTE STATISTICS

	1968	Proposed
One-Way Route Miles	8.99	12.88
Annual Vehicle Miles	52,660	69,280
Annual Vehicle Hours	3,160	4,620
Average Speed (mph)	16.7	15.0
Average Weekday Adult Revenue Passengers	78	150
Annual Revenue	$ 9,870	$16,410
Annual Cost	$30,760	$42,890
Operating Ratio (Cost/Revenue)	3.12	2.61
Revenue per Vehicle Mile	18.7¢	23.7¢
Cost per Vehicle Mile	58.4¢	61.9¢
Margin per Vehicle Mile	– 39.7¢	– 38.2¢
Revenue per Vehicle Hour	$ 3.12	$ 3.55
Cost per Vehicle Hour	$ 9.72	$ 9.28
Margin per Vehicle Hour	–$ 6.60	–$ 5.73

TWIN CITY LINES, INC.: PROPOSED ROUTE REVISIONS
ST. PAUL DIVISION: ROUTE 3, GRAND-E. 3RD STREET-MARIA

Proposed Revisions

- Extend branch 3D east along Upper Afton Road to Highway 120 (Century Avenue) and then south on Highway 120 to Lower Afton Road (thereby serving the Ramsey County Workhouse).

- Eliminate branch 3B (Sun-Ray).

- Create a new route. Extend branch 3A east beyond McKnight Road on Conway Avenue (substantially upgrading service to many 3M buildings) to Highway 120 (Century Avenue) then north to Brook Street, east to Upland Avenue and south along Upland and Ridgecrest Avenues to frontage road of I-94. The route will run west along the frontage road to Highway 120 and then north to Conway Avenue and west to downtown St. Paul. The route could then be connected to a downtown extension of Route 6 to form a new route (see Route 6).

ROUTE STATISTICS

	1968	Proposed *
One-Way Route Miles	15.71	14.00
Annual Vehicle Miles	552,350	430,000
Annual Vehicle Hours	47,750	34,400
Average Speed (mph)	11.6	12.5
Average Weekday Adult Revenue Passengers	5,412	4,250
Annual Revenue	$494,490	$414,640
Annual Cost	$399,760	$296,520
Operating Ratio (Cost/Revenue)	0.81	0.72
Revenue per Vehicle Mile	89.5¢	96.4¢
Cost per Vehicle Mile	72.4¢	69.0¢
Margin per Vehicle Mile	+ 17.1¢	+ 27.4¢
Revenue per Vehicle Hour	$ 10.35	$ 12.05
Cost per Vehicle Hour	$ 8.37	$ 8.62
Margin per Vehicle Hour	+$ 1.98	+$ 3.43

*Does not include existing branch 3A which is included in the Route 6 Summary.

TWIN CITY LINES, INC.: PROPOSED ROUTE REVISIONS
ST. PAUL DIVISION: ROUTE 4, SNELLING CROSSTOWN

Proposed Revisions

None

ROUTE STATISTICS

	1968	Proposed
One-Way Route Miles	10.50	10.50
Annual Vehicle Miles	263,950	263,950
Annual Vehicle Hours	22,770	20,300
Average Speed	11.6	13.0
Average Weekday Adult Revenue Passengers	1,832	1,800
Annual Revenue	$189,360	$194,080
Annual Cost	$190,770	$177,690
Operating Ratio (Cost/Revenue)	1.01	0.92
Revenue per Vehicle Mile	71.7¢	73.5¢
Cost per Vehicle Mile	72.3¢	67.3¢
Margin per Vehicle Mile	– 0.6¢	– 6.2¢
Revenue per Vehicle Hour	$ 8.32	$ 9.56
Cost per Vehicle Hour	$ 8.38	$ 8.75
Margin per Vehicle Hour	–$ 0.06	+$ 0.81

TWIN CITY LINES, INC.: PROPOSED ROUTE REVISIONS
ST. PAUL DIVISION: ROUTE 5, COMO-STRYKER

Proposed Revisions

- Extend branch 5B west on Butler Avenue from Stryker Avenue to Charlton Street and south on Charlton Street to Wentworth Avenue (substantial residential and apartment development).

ROUTE STATISTICS

	1968	Proposed
One-Way Route Miles	11.16	12.43
Annual Vehicle Miles	367,090	408,780
Annual Vehicle Hours	30,050	30,280
Average Speed (mph)	12.2	13.5
Average Weekday Adult Revenue Passengers	2,690	2,900
Annual Revenue	$234,340	$261,500
Annual Cost	$256,720	$269,060
Operating Ratio (Cost/Revenue)	1.10	1.03
Revenue per Vehicle Mile	63.8¢	64.0¢
Cost per Vehicle Mile	69.9¢	65.8¢
Margin per Vehicle Mile	– 6.1¢	– 1.8¢
Revenue per Vehicle Hour	$ 7.80	$ 8.64
Cost per Vehicle Hour	$ 8.54	$ 8.89
Margin per Vehicle Hour	–$ 0.74	–$ 0.25

TWIN CITY LINES, INC.: PROPOSED ROUTE REVISIONS
ST. PAUL DIVISION: ROUTE 6, DALE STREET

Proposed Revisions

- Eliminate portion of route between Selby Avenue and Grand Avenue and run the route east along Selby Avenue to downtown St. Paul and then along East 3rd Street as part of new route (see Route 3). This would combine the north-south crosstown service provided by the present route with needed downtown service.

- Extend Route 6 north along Dale Street from Arlington Avenue to Larpenteur Avenue.

ROUTE STATISTICS

	1968	Proposed*
One-Way Route Miles	3.79	13.70
Annual Vehicle Miles	54,230	192,000
Annual Vehicle Hours	5,060	16,700
Average Speed (mph)	10.7	11.5
Average Weekday Adult Revenue Passengers	416	1,500
Annual Revenue	$45,720	$140,150
Annual Cost	$41,210	$139,490
Operating Ratio (Cost/Revenue)	0.90	1.00
Revenue per Vehicle Mile	84.3¢	73.0¢
Cost per Vehicle Mile	76.0¢	72.7¢
Margin per Vehicle Mile	+ 8.3¢	+ 0.3¢
Revenue per Vehicle Hour	$ 9.63	$ 8.39
Cost per Vehicle Hour	$ 8.14	$ 8.35
Margin per Vehicle Hour	+$ 0.89	+$ 0.04

* Includes branch 3A (extended).

TWIN CITY LINES, INC.: PROPOSED ROUTE REVISIONS
ST. PAUL DIVISION: ROUTE 7, HAMLINE-CHEROKEE HEIGHTS

Proposed Revisions

- Two changes will be made to the western section of this route:

  Route 7A will follow the existing route west along Thomas Avenue to Victoria Street and then turn north to Minnehaha Avenue and thence south along Prior and Cleveland Avenues to a terminus at Grand and Cleveland Avenues (St. Thomas College and St. Paul Seminary).

  Route 7B would run south from the St. Paul CBD along West 7th Street to Randolph Avenue and then south on Edgcumbe Road to Highland Parkway, west to Fairview Avenue and south to Sheridan Avenue, then west to Cleveland Avenue and north to a terminus at Grand Avenue. This route could connect with revised Route 9C in downtown St. Paul to form a new east-west through route (see Route 9).

- There are two other route changes which concern the south portion of the route:

  Extend branch 7A in West St. Paul east along Emerson Avenue to Delaware Road and then, south to Wentworth Avenue and then east to Charlton Street. Operate a new branch which would turn west on Dodd Road (from Smith Avenue) and continue south to Wentworth Avenue and then east to a terminus at Delaware Avenue.

ROUTE STATISTICS

	1968	Proposed *
One-Way Route Miles	19.02	24.40
Annual Vehicle Miles	500,320	564,270
Annual Vehicle Hours	40,800	40,300
Average Speed (mph)	12.3	14.0
Average Weekday Adult Revenue Passengers	3,422	3,800
Annual Revenue	$317,380	$362,170
Annual Cost	$349,090	$363,480
Operating Ratio (Cost/Revenue)	1.10	1.00
Revenue per Vehicle Mile	63.4¢	64.2¢
Cost per Vehicle Mile	69.8¢	64.4¢
Margin per Vehicle Mile	– 6.4¢	– 0.2¢
Revenue per Vehicle Hour	$ 7.78	$ 8.99
Cost per Vehicle Hour	$ 8.56	$ 9.02
Margin per Vehicle Hour	–$ 0.78	–$ 0.03

* Route 7 only – does not include branch 9C.

TWIN CITY LINES, INC.: PROPOSED ROUTE REVISIONS
ST. PAUL DIVISION: ROUTE 8, JACKSON-SOUTH ST. PAUL

Proposed Revisions

- Eliminate the loop at Oakdale Avenue in West St. Paul.

- Extend some of branch 8B runs to the south. Provide some new service from intersection of Robert Street and Thompson Avenue south along Robert Street to Marie Avenue to Oakdale Avenue, to Lotherback Avenue, to Robert Street and return thereby circling a very large industrial and apartment complex.

- Operate other branch 8B service east via Butler Avenue to 19th Avenue and south to Bromley Street and then east to 15th Avenue and south to Southview Boulevard. The route would then loop via Southview Boulevard, 21st Avenue S., and Wentworth Avenue to 15th Avenue.

ROUTE STATISTICS

	1968	Proposed
One-Way Route Miles	13.85	19.65
Annual Vehicle Miles	346,080	411,280
Annual Vehicle Hours	25,620	27,420
Average Speed (mph)	13.5	15.0
Average Weekday Adult Revenue Passengers	2,462	4,200
Annual Revenue	$206,710	$363,370
Annual Cost	$227,700	$254,600
Operating Ratio (Cost/Revenue)	1.10	0.70
Revenue per Vehicle Mile	59.7¢	88.4¢
Cost per Vehicle Mile	65.8¢	61.9¢
Margin per Vehicle Mile	– 6.1¢	+ 26.5¢
Revenue per Vehicle Hour	$ 8.07	$ 13.25
Cost per Vehicle Hour	$ 8.89	$ 9.29
Margin per Vehicle Hour	–$ 0.82	+$ 3.96

TWIN CITY LINES, INC.: PROPOSED ROUTE REVISIONS
ST. PAUL DIVISION: ROUTE 9, FORT SNELLING-HAZEL PARK-NO. ST. PAUL

Proposed Revisions

- Extend branch 9C (North) west along 17th Avenue to White Bear Avenue (to make connection with Route 15). Eliminate the section of branch 9C along Larpenteur Avenue between White Bear Avenue and McKnight Road. Continue 9C south along McKnight Road to I-94 and then west to Maria Avenue, north on Maria Avenue to East 7th Street and west to the St. Paul CBD The route could connect with new Route 7 (branch 7B) to form a new route (see Route 7).

- Extend some runs of branch 9G (North) south along White Bear Avenue to East 3rd Street (thereby helping to make some school connections) and then west to downtown St. Paul.

- Eliminate branch 9A (South) between West 7th Street and St. Paul Avenue and Ford Parkway and Cleveland Avenue - - new Route 7B (combined with Route 9C) will serve the area.

ROUTE STATISTICS

	1968	Proposed*
One-Way Route Miles	25.32	30.22
Annual Vehicle Miles	638,870	759,870
Annual Vehicle Hours	48,070	49,020
Average Speed (mph)	13.3	15.5
Average Weekday Adult Revenue Passengers	4,342	3,500
Annual Revenue	$366,720	$309,180
Annual Cost	$424,470	$461,700
Operating Ratio (Cost/Revenue)	1.16	1.49
Revenue per Vehicle Mile	57.4¢	40.7¢
Cost per Vehicle Mile	66.4¢	60.8¢
Margin per Vehicle Mile	– 9.0¢	– 20.1¢
Revenue per Vehicle Hour	$ 7.63	$ 6.31
Cost per Vehicle Hour	$ 8.83	$ 9.42
Margin per Vehicle Hour	–$ 1.20	–$ 3.11

* Route 9 only – does not include branch 7B

TWIN CITY LINES, INC.: PROPOSED ROUTE REVISIONS
ST. PAUL DIVISION: ROUTE 10, ST. CLAIR-PHALEN

Proposed Revisions

- Operate branch 10A (North) along Forest Avenue as at present, but turn west at Wheelock Parkway to Arcade Avenue and then north to Roselawn Avenue.

ROUTE STATISTICS

	1968	Proposed
One-Way Route Miles	9.13	11.32
Annual Vehicle Miles	286,770	324,140
Annual Vehicle Hours	23,720	26,930
Average Speed (mph)	11.3	12.5
Average Weekday Adult Revenue Passengers	2,180	2,450
Annual Revenue	$184,020	$214,330
Annual Cost	$196,540	$223,510
Operating Ratio (Cost/Revenue)	1.07	1.04
Revenue per Vehicle Mile	69.0¢	66.1¢
Cost per Vehicle Mile	73.7¢	69.0¢
Margin per Vehicle Mile	– 4.7¢	– 2.9¢
Revenue per Vehicle Hour	$ 7.76	$ 8.27
Cost per Vehicle Hour	$ 8.29	$ 8.62
Margin per Vehicle Hour	–$ 0.53	–$ 0.35

TWIN CITY LINES, INC.: PROPOSED ROUTE REVISIONS
ST. PAUL DIVISION: ROUTE 11, ARKWRIGHT-SOUTH ST. PAUL

Proposed Revisions

- Operate branch 11B (North) as an express route. Provide local service between northern terminus (at County Road and U.S. 61) and Larpenteur Avenue (city boundary). The route would then turn west along Larpenteur Avenue to 35E and express south to downtown St. Paul.

- Operate Route 11 (South) via the Lafayette Bridge between downtown St. Paul and South St. Paul.

ROUTE STATISTICS

	1968	Proposed
One-Way Route Miles	16.87	17.47
Annual Vehicle Miles	341,470	361,440
Annual Vehicle Hours	33,210	20,650
Average Speed (mph)	11.2	17.5
Average Weekday Adult Revenue Passengers	2,748	3,300
Annual Revenue	$231,290	$287,570
Annual Cost	$274,620	$205,500
Operating Ratio (Cost/Revenue)	1.19	0.71
Revenue per Vehicle Mile	62.3¢	79.6¢
Cost per Vehicle Mile	73.9¢	56.9¢
Margin per Vehicle Mile	– 11.6¢	+ 22.7¢
Revenue per Vehicle Hour	$ 6.97	$ 13.93
Cost per Vehicle Hour	$ 8.27	$ 9.95
Margin per Vehicle Hour	–$ 1.30	+$ 3.98

TWIN CITY LINES, INC.: PROPOSED ROUTE REVISIONS
ST. PAUL DIVISION: ROUTE 12, E. 6TH STREET-STILLWATER-FALCON HEIGHTS

Proposed Revisions

- Operate branch 12D as local service west from Stillwater to Highway 120, then south to I-94 and then west to Maria Avenue, north to East 7th Street and then downtown. This route change and the one discussed above eliminate service along Highway 212 between McKnight Road and Highway 120.

- Eliminate section of branch 12C south of I-94 (much of this section will be served by revised Route 3D).

ROUTE STATISTICS

	1968	Proposed
One-Way Route Miles	34.87	39.17
Annual Vehicle Miles	661,130	649,840
Annual Vehicle Hours	45,860	39,380
Average Speed	14.4	16.5
Average Weekday Adult Revenue Passengers	4,172	3,000
Annual Revenue	$381,020	$295,860
Annual Cost	$418,680	$381,400
Operating Ratio (Cost/Revenue)	1.10	1.29
Revenue per Vehicle Mile	57.6¢	45.5¢
Cost per Vehicle Mile	63.3¢	58.7¢
Margin per Vehicle Mile	– 5.7¢	– 13.2¢
Revenue per Vehicle Hour	$ 8.31	$ 7.51
Cost per Vehicle Hour	$ 9.13	$ 9.68
Margin per Vehicle Hour	–$ 0.82	–$ 2.17

TWIN CITY LINES, INC.: PROPOSED ROUTE REVISIONS
ST. PAUL DIVISION: ROUTE 14, RANDOLPH-PAYNE

Proposed Revisions

None

ROUTE STATISTICS

	1968	Proposed
One-Way Route Miles	15.83	15.83
Annual Vehicle Miles	644,200	644,200
Annual Vehicle Hours	50,920	47,720
Average Speed (mph)	12.6	13.5
Average Weekday Adult Revenue Passengers	5,758	5,900
Annual Revenue	$518,010	$550,520
Annual Cost	$440,950	$424,030
Operating Ratio (Cost/Revenue)	0.85	0.77
Revenue per Vehicle Mile	80.4¢	85.5¢
Cost per Vehicle Mile	68.4¢	65.8¢
Margin per Vehicle Mile	+ 12.0¢	+ 19.7¢
Revenue per Vehicle Hour	$ 10.17	$ 11.54
Cost per Vehicle Hour	$ 8.66	$ 8.89
Margin per Vehicle Hour	+$ 1.51	+$ 2.65

TWIN CITY LINES, INC.: PROPOSED ROUTE REVISIONS
ST. PAUL DIVISION: ROUTE 15, WHITE BEAR-MAHTOMEDI

Proposed Revisions

- Operate limited service as at present, but provide express runs. Branches of Route 15 would run south from the White Bear Lake area to Roselawn Avenue and then west to 35E and south to downtown St. Paul.

ROUTE STATISTICS

	1968	Proposed
One-Way Route Miles	32.55	33.55
Annual Vehicle Miles	148,280	156,430
Annual Vehicle Hours	7,910	6,260
Average Speed (mph)	18.8	25 0
Average Weekday Adult Revenue Passengers	364	400
Annual Revenue	$30,420	$34,700
Annual Cost	$81,320	$74,770
Operation Ratio (Cost/Revenue)	2 67	2.16
Revenue per Vehicle Mile	20.5¢	22 2¢
Cost per Vehicle Mile	54 8¢	47 8¢
Margin per Vehicle Mile	– 34.3¢	– 25.6¢
Revenue per Vehicle Hour	$ 3.85	$ 5.54
Cost per Vehicle Hour	$ 10 29	$ 11 94
Margin per Vehicle Hour	–$ 6 44	–$ 6 40

TWIN CITY LINES, INC.: PROPOSED ROUTE REVISIONS
MINNEAPOLIS DIVISION: ROUTE 1, KENWOOD-N. W. TERMINAL

Proposed Revisions

- Extend branch 1B (South) via Cedar Lake and France Avenues to Lake Street (thereby eliminating need for branch 17B).

- Extend branch 1B (North) along Stinson Boulevard to serve Medical Center near Silver Lane then turn east on Silver Lane to Silver Lake Road and then south to Apache Plaza (a potential park-ride site).

ROUTE STATISTICS

	1968	Proposed
One-Way Route Miles	13.71	15.61
Annual Vehicle Miles	256,120	267,710
Annual Vehicle Hours	24,990	23,280
Average Speed (mph)	10.3	11.5
Average Weekday Adult Revenue Passengers	2,192	2,300
Annual Revenue	$189,520	$206,210
Annual Cost	$200,400	$194,460
Operating Ratio (Cost/Revenue)	1.06	0.94
Revenue per Vehicle Mile	74.0¢	77.0¢
Cost per Vehicle Mile	78.2¢	72.6¢
Margin per Vehicle Mile	– 4.2¢	+ 4.4¢
Revenue per Vehicle Hour	$ 7.58	$ 8.86
Cost per Vehicle Hour	$ 8.02	$ 8.35
Margin per Vehicle Hour	–$ 0.44	+$ 0.51

TWIN CITY LINES, INC.: PROPOSED ROUTE REVISIONS
MINNEAPOLIS DIVISION: ROUTE 3, BROADWAY CROSSTOWN

Proposed Revisions

- Create a new route. Operate branch 3B (West) along Meridian Drive, Zenith Avenue, Golden Valley Road and Broadway (as at present) but then turn south on Fremont Avenue to 7th Street and downtown Minneapolis. The route will serve the CBD and turn south on 4th Avenue to 35W and then operate as an express to 62nd Street and Portland Avenue where it will continue south as a local service run along the same routes at branches 5D (South) and 5H (South). The loop of branch 5H should be enlarged - - continue west on 86th Street to Cedar Avenue, north to 84th Street, east to 8th Avenue and north to 82nd Street and back to 12th Avenue S.

- Continue to operate the remainder of the route as a crosstown line (with some revision in schedule due to the new route).

ROUTE STATISTICS

	1968	Proposed *	Proposed **
One-Way Route Miles	9.06	9.06	17.98
Annual Vehicle Miles	130,410	100,000	472,400
Annual Vehicle Hours	14,230	9,520	24,230
Average Speed - mph	9.2	10.5	19.5
Average Weekday Adult Revenue Passengers	796	450	2,950
Annual Revenue	$ 58,610	$ 49,570	$254,670
Annual Cost	$110,030	$ 77,000	$253,990
Operating Ratio (Cost/Revenue)	1.40	1.55	1.00
Revenue per Vehicle Mile	60.3¢	49.6¢	53.9¢
Cost per Vehicle Mile	84.4¢	77.0¢	53.8¢
Margin per Vehicle Mile	– 24.1¢	– 27.4¢	+ 0.1¢
Revenue per Vehicle Hour	$ 5.52	$ 5.21	$ 10.51
Cost per Vehicle Hour	$ 7.73	$ 8.09	$ 10.48
Margin per Vehicle hour	– 2.21	–$ 2.88	+$ 0.03

* Route 3 Crosstown

** Route 3-Downtown and Express (3D and 5H).

TWIN CITY LINES, INC.: PROPOSED ROUTE REVISIONS
MINNEAPOLIS DIVISION: ROUTE 4, BRYANT-JOHNSON-NEW BRIGHTON

Proposed Revisions

- Create two new express branches (4K and 4E). Extend branch 4K west of Highway 100 (initiated by TCL on May 26, 1969). Operate 4K along Eden Avenue, 50th Street and Bryant Avenue as at present but turn east on 46th Street to 35W and then north to downtown Minneapolis; then north on 7th Street to Hennepin, east to Washington Avenue, south to 2nd Avenue South and back to 35W. The route would then run south on 35W to 62nd Street and west to Penn Avenue where it would provide local service south along Penn Avenue to 102nd Street (Bloomington City Hall).

- Provide some non-stop service (along local streets) for some branch 4A (North) runs between downtown Minneapolis and the city boundary at 37th Avenue N.E.

ROUTE STATISTICS

	1968	Proposed
One-Way Route Miles	23.08	27.93
Annual Vehicle Miles	1,067,080	1,230,410
Annual Vehicle Hours	92,660	87,890
Average Speed (mph)	11.5	14.0
Average Weekday Adult Revenue Passengers	8,342	12,500
Annual Revenue	$701,200	$1,084,130
Annual Cost	$774,450	$ 792,670
Operating Ratio (Cost/Revenue)	1.10	0.73
Revenue per Vehicle Mile	65.7¢	88.1¢
Cost per Vehicle Mile	72.6¢	64.4¢
Margin per Vehicle Mile	– 6.9¢	+ 23.7¢
Revenue per Vehicle Hour	$ 7.57	$ 12.33
Cost per Vehicle Hour	$ 8.36	$ 9.01
Margin per Vehicle Hour	–$ 0.79	+$ 3.32

TWIN CITY LINES, INC.: PROPOSED ROUTE REVISIONS
MINNEAPOLIS DIVISION: ROUTE 5, CHICAGO-PENN-FREMONT

Proposed Revisions

- Extend branch 5B (North) along Osseo Road to 77th Avenue (Zanebrook Shopping Center). Provide local service between Zanebrook and 51st Avenue and non-stop service from 51st Avenue to downtown via Fremont Avenue.

- Eliminate branch 5C (South) and extend branch 5G (South) along Chicago Avenue to 61st Street East and east on that street to 12th Avenue and north to 57th Street East and then continue along present route.

- Branches 5D (South) and 5H (South) will be operated as express runs as part of the new route created by combining with Route 3B (see Route 3).

ROUTE STATISTICS

	1968	Proposed
One-Way Route Miles	34.93	36 98
Annual Vehicle Miles	1,569,900	1,620,000
Annual Vehicle Hours	130,620	120,000
Average Speed (mph)	12.0	13.5
Average Weekday Adult Revenue Passengers	14,210	14,200
Annual Revenue	$1,233,020	$1,280,680
Annual Cost	$1,109,140	$1,066,310
Operating Ratio (Cost/Revenue)	0.90	0.83
Revenue per Vehicle Mile	78.6¢	79.1¢
Cost per Vehicle Mile	70.7¢	65.8¢
Margin per Vehicle Mile	+ 7.9¢	+ 13.3¢
Revenue per Vehicle Hour	$ 9.44	$ 10.67
Cost per Vehicle Hour	$ 8.49	$ 8.89
Margin per Vehicle Hour	+$ 0.95	+$ 1.78

TWIN CITY LINES, INC.: PROPOSED ROUTE REVISIONS
MINNEAPOLIS DIVISION: ROUTE 6, COMO-XERXES-FRANCE

Proposed Revisions

- Eliminate branch 6N (South).

- Operate three new branches of Route 6 (South):

  Branch 6B would turn west on 54th Street and south on Woodale Road as at present, but would continue to Valley View Road where it would turn east to France Avenue and then north along existing route

  Branch 6C would begin at Southdale Hospital, loop the Southdale Center, and travel east to Xerxes Avenue where it would turn north and follow the existing route

  Branch 6D would begin at Southdale Center and travel north on Xerxes Avenue to County Road 62 where it would turn east to 35W, then north to Downtown. Some runs on this route could also travel west from Southdale along 70th Street to Highway 100 (Normandale Road) then south to the industrial area north of I-494.

ROUTE STATISTICS

	1968	Proposed
One-Way Route Miles	22.75	23.00
Annual Vehicle Miles	1,152,040	1,175,550
Annual Vehicle Hours	100,570	83,970
Average Speed (mph)	11.4	14.0
Average Weekday Adult Revenue Passengers	12,104	12,100
Annual Revenue	$1,023,680	$1,063,620
Annual Cost	$ 838,900	$ 757,318
Operating Ratio (Cost/Revenue)	0.82	0.71
Revenue per Vehicle Mile	88.9¢	90.5¢
Cost per Vehicle Mile	72.8¢	64.4¢
Margin per Vehicle Mile	+ 16.1¢	+ 26.1¢
Revenue per Vehicle Hour	$ 10.18	$ 12.67
Cost per Vehicle Hour	$ 8.34	$ 9.02
Margin per Vehicle Hour	+$ 1.84	+$ 3.65

TWIN CITY LINES, INC.: PROPOSED ROUTE REVISIONS
MINNEAPOLIS DIVISION: ROUTE 7, FORT SNELLING-MINNEHAHA-N. WASHINGTON

Proposed Revisions

- Extend some runs of branch 7B or C (South) across the Mendota Bridge to serve Mendota and Mendota Heights.

ROUTE STATISTICS

	1968	Proposed
One-Way Route Miles	14.28	16.68
Annual Vehicle Miles	475,550	511,600
Annual Vehicle Hours	38,580	36,540
Average Speed (mph)	12.3	14.0
Average Weekday Adult Revenue Passengers	3,674	3,800
Annual Revenue	$312,280	$335,600
Annual Cost	$330,780	$329,570
Operating Ratio (Cost/Revenue)	1.06	0.98
Revenue per Vehicle Mile	65.7¢	65.6¢
Cost per Vehicle Mile	69.6¢	64.4¢
Margin per Vehicle Mile	– 3.9¢	+ 1.2¢
Revenue per Vehicle Hour	$ 8.09	$ 9.18
Cost per Vehicle Hour	$ 8.57	$ 9.02
Margin per Vehicle Hour	–$ 0.48	+$ 0.16

TWIN CITY LINES, INC.: **PROPOSED ROUTE REVISIONS**
MINNEAPOLIS DIVISION: **ROUTE 8, FRANKLIN-N. LYNDALE**

Proposed Revisions

- Extend branch 8C (East) to University and Emerald Avenues.

ROUTE STATISTICS

	1968	Proposed
One-Way Route Miles	17.96	19.00
Annual Vehicle Miles	621,630	633,860
Annual Vehicle Hours	54,710	50,710
Average Speed (mph)	11.4	12.5
Average Weekday Adult Revenue Passengers	5,688	5,500
Annual Revenue	$493,920	$497,280
Annual Cost	$455,030	$437,100
Operating Ratio (Cost/Revenue)	0.92	0.88
Revenue per Vehicle Mile	79.5¢	78.5¢
Cost per Vehicle Mile	73.2¢	69.0¢
Margin per Vehicle Mile	+ 6.3¢	+ 9.5¢
Revenue per Vehicle Hour	$ 9.03	$ 9.81
Cost per Vehicle Hour	$ 8.32	$ 8.62
Margin per Vehicle Hour	+$ 0.71	+$ 1.19

TWIN CITY LINES, INC.: PROPOSED ROUTE REVISIONS
MINNEAPOLIS DIVISION: ROUTE 9, GLENWOOD-4TH AVENUE SOUTH-ERYN MAWR

Proposed Revisions

- Operate express service on branch 9C (West) as follows: from western terminus via Cedar Lake Road and Vernon Avenue to Wayzata Boulevard and then (non-stop) east on Wayzata Boulevard to Hennepin Avenue and into downtown Minneapolis.

- Extend the terminus of branch 9B (West) west and south to the intersection of Turners Cross Road and Wayzata Boulevard. Operate local service between that point and the intersection of Glenwood Avenue and Cedar Lake Road and then provide non-stop service through to downtown Minneapolis.

- The intersection of Wayzata Boulevard and Vernon Avenue thereby becomes a prime site for a park-ride facility.

ROUTE STATISTICS

	1968	Proposed
One Way Route Miles	15 55	15 55
Annual Vehicle Miles	565,830	579,940
Annual Vehicle Hours	53,760	44,610
Average Speed (mph)	10 5	13.0
Average Weekday Adult Revenue Passengers	6,466	7,000
Annual Revenue	$558,380	$625,980
Annual Cost	$435,150	$390,460
Operating Ratio (Cost/Revenue)	0 78	0.62
Revenue per Vehicle Mile	98 7¢	$ 1 08
Cost per Vehicle Mile	76.9¢	67 3¢
Margin per Vehicle Mile	+ 21 8¢	+ 40 6¢
Revenue per Vehicle Mile	$ 10 38	$ 14.03
Cost per Vehicle Hour	$ 8 09	$ 8.75
Margin per Vehicle Hour	+$ 2 29	+$ 5.28

TWIN CITY LINES, INC.: PROPOSED ROUTE REVISIONS
MINNEAPOLIS DIVISION: ROUTE 10, GRAND AVENUE-CENTRAL

Proposed Revisions

- Provide some non-stop service via Central Avenue between 37th Avenue NE and downtown.

ROUTE STATISTICS

	1968	Proposed
One-Way Route Miles	18.83	18.83
Annual Vehicle Miles	610,030	630,000
Annual Vehicle Hours	55,350	50,400
Average Speed (mph)	11.0	12.5
Average Weekday Adult Revenue Passengers	6,908	7,500
Annual Revenue	$581,650	$655,120
Annual Cost	$455,280	$434,430
Operating Ratio (Cost/Revenue)	0.78	0.66
Revenue per Vehicle Mile	95.3¢	$ 1.04
Cost per Vehicle Mile	74.6¢	69.0¢
Margin per Vehicle Mile	+ 20.7¢	+ 35.0¢
Revenue per Vehicle Hour	$ 10.51	$ 13.00
Cost per Vehicle Hour	$ 8.23	$ 8.62
Margin per Vehicle Hour	+$ 2.28	+$ 4.38

TWIN CITY LINES, INC.: PROPOSED ROUTE REVISIONS
MINNEAPOLIS DIVISION: ROUTE 12, MINNEAPOLIS-GLEN LAKE

Proposed Revisions

None

ROUTE STATISTICS

	1968	Proposed
One Way Route Miles	22.94	22.94
Annual Vehicle Miles	399,370	399,370
Annual Vehicle Hours	30,360	26,620
Average Speed (mph)	13.1	15.0
Average Weekday Adult Revenue Passengers	2,402	2,400
Annual Revenue	$198,980	$206,210
Annual Cost	$266,930	$247,190
Operating Ratio (Cost/Revenue)	1.34	1.20
Revenue per Vehicle Mile	49.8¢	51.6¢
Cost per Vehicle Mile	66.9¢	61.9¢
Margin per Vehicle Mile	-17.1¢	-10.3¢
Revenue per Vehicle Hour	$ 6.55	$ 7.75
Cost per Vehicle Hour	$ 8.79	$ 9.29
Margin per Vehicle Hour	-$ 2.24	-$ 1.54

TWIN CITY LINES, INC: PROPOSED ROUTE REVISIONS
MINNEAPOLIS DIVISION: ROUTE 14, BLOOMINGTON-ROBBINSDALE

Proposed Revisions

- Create new branch which would continue northwest along Broadway to Douglas Drive (County Road 102 in Crystal), south on Douglas Drive to 42nd Avenue North, and then east to Broadway and southeast along Broadway to downtown Minneapolis.

ROUTE STATISTICS

	1968	Proposed
One Way Route Miles	15.64	19 24
Annual Vehicle Miles	566,770	610,000
Annual Vehicle Hours	47,440	45,180
Average Speed (mph)	12 0	13 5
Average Weekday Adult Revenue Passengers	5,336	6,150
Annual Revenue	$449,100	$536,340
Annual Cost	$401,930	$401,480
Operating Ratio (Cost/Revenue)	0.89	0.75
Revenue per Vehicle Mile	79.2¢	87.9¢
Cost per Vehicle Mile	70.9¢	65.8¢
Margin per Vehicle Mile	+ 8.3¢	+ 22.1¢
Revenue per Vehicle Hour	$ 9.46	$ 11.87
Cost per Vehicle Hour	$ 8.47	$ 8 89
Margin per Vehicle Hour	+$ 0.99	+$ 2 98

TWIN CITY LINES, INC.: PROPOSED ROUTE REVISIONS
MINNEAPOLIS DIVISION: ROUTE 15, 66TH STREET CROSSTOWN

Proposed Revisions

None

ROUTE STATISTICS

	1968	Proposed
One-Way Route Miles	4.95	4.95
Annual Vehicle Miles	113,480	113,480
Annual Vehicle Hours	9,170	8,410
Average Speed (mph)	12.4	13.5
Average Weekday Adult Revenue Passengers	572	650
Annual Revenue	$47,200	$55,720
Annual Cost	$78,750	$74,690
Operating Ratio (Cost/Revenue)	1.67	1.34
Revenue per Vehicle Mile	41.6¢	49.1¢
Cost per Vehicle Mile	69.4¢	65.9¢
Margin per Vehicle Mile	– 27.8¢	– 16.8¢
Revenue per Vehicle Hour	$ 5.15	$ 6.63
Cost per Vehicle Hour	$ 8.59	$ 8.88
Margin per Vehicle Hour	–$ 3.44	–$ 2.25

TWIN CITY LINES, INC.: MINNEAPOLIS DIVISION.

PROPOSED ROUTE REVISIONS
ROUTE 17, NICOLLET-HENNEPIN-ST. LOUIS PARK

Proposed Revisions

- Eliminate branch 17B and extend branch 1B to cover area (see Route 1 suggestion).

- Eliminate branch 17G.

- Extend some Route 17 runs to the University area via Hennepin and University Avenues.

ROUTE STATISTICS

	1968	Proposed
One Way Route Miles	14.00	14.28
Annual Vehicle Miles	597,800	633,230
Annual Vehicle Hours	61,990	55,060
Average Speed (mph)	9.6	11.5
Average Weekday Adult Revenue Passengers	6,570	6,950
Annual Revenue	$560,430	$614,960
Annual Cost	$487,170	$459,950
Operating Ratio (Cost/Revenue)	0.87	0.75
Revenue per Vehicle Mile	93.7¢	97.1¢
Cost per Vehicle Mile	81.5¢	72.6¢
Margin per Vehicle Mile	+ 12.3¢	+ 24.5¢
Revenue per Vehicle Hour	$ 9.04	$ 11.17
Cost per Vehicle Hour	$ 7.86	$ 8.35
Margin per Vehicle Hour	+$ 1.18	+$ 2.82

TWIN CITY LINES, INC.: PROPOSED ROUTE REVISIONS
MINNEAPOLIS DIVISION: ROUTE 18, NICCLLET-2ND STREET N. E.-MONROE

Proposed Revisions

- Operate branch 18D (North) as partial non-stop. Provide local service north of city limits - - from Fairway Drive and Upland Crest to University and 37th Avenues. Non-stop from that point south along University Avenue to Hennepin Avenue Bridge and downtown.

ROUTE STATISTICS

	1968	Proposed
One Way Route Miles	27 72	27.72
Annual Vehicle Miles	1,172,410	1,192,500
Annual Vehicle Hours	100,890	88,330
Average Speed (mph)	11.6	13.5
Average Weekday Adult Revenue Passengers	11,550	11,650
Annual Revenue	$1,012,990	$1,061,390
Annual Cost	$ 846,000	$ 784,900
Operating Ratio (Cost/Revenue)	0.84	0.74
Revenue per Vehicle Mile	86.4¢	89.0¢
Cost per Vehicle Mile	72.2¢	65.8¢
Margin per Vehicle Mile	+ 14.2¢	+ 23.2¢
Revenue per Vehicle Hour	$ 10.04	$ 12 02
Cost per Vehicle Hour	$ 8.39	$ 8·89
Margin per Vehicle Hour	+$ 1.65	+$ 3 13

TWIN CITY LINES, INC.: PROPOSED ROUTE REVISIONS
MINNEAPOLIS DIVISION: ROUTE 19, OLSON HIGHWAY - 28TH AVENUE SOUTH

Proposed Revisions

None

ROUTE STATISTICS

	1968	Proposed
One-Way Route Miles	10.44	10.44
Annual Vehicle Miles	411,910	411,910
Annual Vehicle Hours	36,050	32,950
Average Speed (mph)	11.4	12.5
Average Weekday Adult Revenue Passengers	3,484	2,800
Annual Revenue	$307,100	$260,730
Annual Cost	$300,450	$284,030
Operating Ratio (Cost/Revenue)	0.98	1.09
Revenue per Vehicle Mile	74.6¢	63.3¢
Cost per Vehicle Mile	72.9¢	69.0¢
Margin per Vehicle Mile	+ 1.7¢	– 5.7¢
Revenue per Vehicle Hour	$ 8.52	$ 7.91
Cost per Vehicle Hour	$ 8.33	$ 8.62
Margin per Vehicle Hour	+$ 0.19	–$ 0.71

TWIN CITY LINES, INC.: PROPOSED ROUTE REVISIONS
MINNEAPOLIS DIVISION: ROUTE 20, PLYMOUTH-EAST 25TH STREET

Proposed Revisions

- Extend branch 20B (South) east from the Ford Plant to Highland Park Shopping Center at Cleveland Avenue and Ford Parkway.

ROUTE STATISTICS

	1968	Proposed
One-Way Route Miles	11.96	12.36
Annual Vehicle Miles	375,240	387,150
Annual Vehicle Hours	32,580	29,780
Average Speed (mph)	11.5	13.0
Average Weekday Adult Revenue Passengers	2,896	2,600
Annual Revenue	$255,880	$240,650
Annual Cost	$272,280	$266,600
Operating Ratio (Cost/Revenue)	1.06	1.08
Revenue per Vehicle Mile	68.2¢	62.2¢
Cost per Vehicle Mile	72.6¢	67.3¢
Margin per Vehicle Mile	– 4.4¢	– 5.1¢
Revenue per Vehicle Hour	$ 7.86	$ 8.08
Cost per Vehicle Hour	$ 8.36	$ 8.75
Margin per Vehicle Hour	–$ 0.50	–$ 0.67

TWIN CITY LINES, INC.: PROPOSED ROUTE REVISIONS
MINNEAPOLIS DIVISION: ROUTE 22, 34TH AVENUE SOUTH

Proposed Revisions

None

ROUTE STATISTICS

	1968	Proposed
One-Way Route Miles	8.70	8.70
Annual Vehicle Miles	398,430	398,430
Annual Vehicle Hours	34,470	30,650
Average Speed (mph)	11.6	13.0
Average Weekday Adult Revenue Passengers	3,214	3,000
Annual Revenue	$290,740	$283,890
Annual Cost	$288,490	$268,270
Operating Ratio (Cost/Revenue)	0.99	0.94
Revenue per Vehicle Mile	73.0¢	71.3¢
Cost per Vehicle Mile	72.4¢	67.3¢
Margin per Vehicle Mile	+ 0.6¢	+ 4.0¢
Revenue per Vehicle Hour	$ 8.43	$ 9.26
Cost per Vehicle Hour	$ 8.37	$ 8.75
Margin per Vehicle Hour	+$ 0.06	+$ 0.51

TWIN CITY LINES, INC.: PROPOSED ROUTE REVISIONS
MINNEAPOLIS DIVISION: ROUTE 23, 38TH STREET

Proposed Revisions

None

ROUTE STATISTICS

	1968	Proposed
One-Way Route Miles	4.95	4.95
Annual Vehicle Miles	151,720	151,720
Annual Vehicle Hours	16,450	13,790
Average Speed (mph)	9.20	11.0
Average Weekday Adult Revenue Passengers	1,212	1,100
Annual Revenue	$117,420	$112,460
Annual Cost	$127,420	$113,370
Operating Ratio (Cost/Revenue)	1.09	1.01
Revenue per Vehicle Mile	77.4¢	74.1¢
Cost per Vehicle Mile	84.0¢	74.7¢
Margin per Vehicle Mile	– 6.6¢	– 0.6¢
Revenue per Vehicle Hour	$ 7.14	$ 8.16
Cost per Vehicle Hour	$ 7.75	$ 8.22
Margin per Vehicle Hour	–$ 0.61	–$ 0.06

TWIN CITY LINES, INC.: PROPOSED ROUTE REVISIONS
INTERCITY ROUTES: ROUTE 16, MINNEAPOLIS-ST. PAUL

Proposed Revisions

- Provide peak hour express service between downtown Minneapolis and downtown St. Paul via I-94.

ROUTE STATISTICS

	1968	Proposed
One-Way Route Miles	12 57	12.57
Annual Vehicle Miles	857,680	907,840
Annual Vehicle Hours	86,020	60,520
Average Speed (mph)	10 0	15 0
Average Weekday Adult Revenue Passengers	8,214	7,300
Annual Revenue	$678,510	$627,090
Annual Cost	$683,550	$561,950
Operating Ratio (Cost/Revenue)	1.01	0.90
Revenue per Vehicle Mile	79 1¢	69.1¢
Cost per Vehicle Mile	79 7¢	61 9¢
Margin per Vehicle Mile	– 0 6¢	+ 7 2¢
Revenue per Vehicle Hour	$ 7 89	$ 10 36
Cost per Vehicle Hour	$ 7 95	$ 9.28
Margin per Vehicle Hour	–$ 0 06	+$ 1.08

TWIN CITY LINES. INC.: PROPOSED ROUTE REVISIONS
INTERCITY ROUTES: ROUTE 21, SELBY-LAKE

Proposed Revisicns - None

ROUTE STATISTICS

	1968	Proposed
One-Way Route Miles	12.72	12 72
Annual Vehicle Miles	1,025,080	1,025,080
Annual Vehicle Hours	99,940	82,010
Average Speed (mph)	10.2	12.5
Average Weekday Adult Revenue Passengers	8,100	7,700
Annual Revenue	$683,442	$676,150
Annual Cost	$801,760	$706,880
Operating Ratio (Cost/Revenue)	1.17	1.05
Revenue per Vehicle Mile	66.7¢	66.0¢
Cost per Vehicle Mile	78 2¢	69.0¢
Margin per Vehicle Mile	– 11 5¢	– 3.0¢
Revenue per Vehicle Hour	$ 6.84	$ 8 24
Cost per Vehicle Hour	$ 8 02	$ 8.62
Margin per Vehicle Hour	–$ 1.18	–$ 0.38

TWIN CITY LINES, INC.: PROPOSED NEW ROUTES
PROPOSED ROUTE SERVING BLOOMINGTON - UNIVERSITY - COLUMBIA HEIGHTS

This route would run north along Nicollet Avenue from 104th Street in Bloomington to Franklin Avenue in Minneapolis and then turn east and cross the Mississippi River to 27th Avenue. It would turn north on this street to University Avenue and then west through the University area to Washington Avenue and Oak Street. At this point the route would turn north to 4th Street S. E. and then run northwest to Hennepin Avenue from which point it would follow existing route 18 via 2nd Street N. E., Grand Street, and other streets to Central Avenue and 40th Avenue N. E.

Service along this route would be provided at peak headways of about 30 minutes and off-peak frequency of approximately 45 to 60 minutes.

The proposed route provides three major advantages:

- East-west crosstown service along Franklin Avenue between Nicollet Avenue and the University area on the east side of the Mississippi River.
- Elimination of some substantial University bound transfer movements between route 16 and routes 5, 9, 17 and 18.
- Additional service along much of route 18, one of the heaviest traveled routes in the system. However, the new route would not provide direct service to downtown Minneapolis.

ROUTE STATISTICS

	Proposed		Proposed
One-Way Route Miles	22.35	Annual Cost	$152,900
Annual Vehicle Miles	221,710	Operating Ratio (Cost/Revenue)	0.78
Annual Vehicle Hours	17,740	Revenue per Vehicle Mile	88.7¢
Average Speed (mph)	12.5	Cost per Vehicle Mile	69.0¢
		Margin per Vehicle Mile	+ 19.7¢
Average Weekday Adult Revenue Passengers	2,300	Revenue per Vehicle Hour	$ 11.08
		Cost per Vehicle Hour	$ 8.62
		Margin per Vehicle Hour	+$ 2.46
Annual Revenue	$196,550		

TWIN CITY LINES, INC.: **PROPOSED NEW ROUTES**
PROPOSED ROUTE SERVING BROOKLYN CENTER - UNIVERSITY - ST. PAUL

This route would operate south from Brooklyn Center (56th and Xerxes Avenues) along Osseo Road and Fremont Avenue to Broadway where it would turn east and cross the Mississippi River. The route would proceed to 2nd Street NE and then southeast to University Avenue (and the University of Minnesota area) and along University Avenue to Cleveland Avenue and then south along Cleveland Avenue to a terminus of Ford Parkway.

The route will provide direct service between the University and Brooklyn Center and the northern section of Minneapolis and will also connect the University directly with the Highland Park area of St. Paul. Service provided by this route should help reduce the substantial number of transfers between route 16 and Minneapolis route 5 and St. Paul route 7. Transfers between Minneapolis routes 5 and 6 should also be reduced.

Service should be provided at about 30 minute intervals during peak periods and at 45 to 60 minute frequency during base periods.

ROUTE STATISTICS

	Proposed		Proposed
One-Way Route Miles	14.20	Annual Cost	$ 97,050
Annual Vehicle Miles	140,740	Operating Ratio (Cost/Revenue)	1.14
Annual Vehicle Hours	11,260	Revenue per Vehicle Mile	60.7¢
Average Speed (mph)	12.5	Cost per Vehicle Mile	69.0¢
		Margin per Vehicle Mile	– 8.3¢
Average Weekday Adult Revenue Passengers	1,000	Revenue per Vehicle Hour	$ 7.59
		Cost per Vehicle Hour	$ 8.62
		Margin per Vehicle Hour	–$ 1.03
Annual Revenue	$ 85,460		

TWIN CITY LINES, INC.: PROPOSED NEW ROUTES
PROPOSED ROUTE SERVING MINNEAPOLIS-UNIVERSITY-ST. PAUL

This route would begin in downtown Minneapolis and loop the central business area and then proceed east across the Mississippi River via Washington Avenue. The route will turn north on Church Street to University Avenue and then southeast to Cleveland Avenue where it will turn south to Grand Avenue and east to downtown St. Paul. At this point, the route will split into two branches:

- One branch will travel east along E. 7th Street to Lafayette Road and then north along Lafayette Road and Burr Street to Minnehaha Avenue and then east to Payne Avenue. The route would then turn north to Maryland Avenue and run east along Maryland Avenue to White Bear Avenue.

- The second branch will proceed east along E. 7th Street to White Bear Avenue and turn north and run to Maryland Avenue.

The route should operate at 30-minute trunk headways (60-minute branch headways) throughout the day.

The proposed route will not only provide additional service along much of St. Paul routes 3 and 14 - - the two most heavily traveled routes in St. Paul - - but will also result in additional intercity service. The route should also reduce some substantial transfer movements to and from route 16.

ROUTE STATISTICS

	Proposed		Proposed
One-Way Route Miles	19.77	Annual Cost	$109,640
Annual Vehicle Miles	155,000	Operating Ratio (Cost/Revenue)	0 51
Annual Vehicle Hours	12,920	Revenue per Vehicle Mile	$ 1.38
Average Speed (mph)	12.0	Cost per Vehicle Mile	70.7¢
		Margin per Vehicle Mile	+ 67.1¢
Average Weekday Adult Revenue Passengers	2,500	Revenue per Vehicle Hour	$ 16.54
		Cost per Vehicle Hour	$ 8 49
		Margin per Vehicle Hour	+$ 8 05
Annual Revenue	$213,650		

TWIN CITY LINES, INC.: PROPOSED NEW ROUTES
PROPOSED NORTH-SOUTH ROUTE ON HIGHWAY 100

The proposed route would run north-south along Highway 100 between I-494 and U.S. 12 (Wayzata Boulevard) at an approximate peak headway of 30 minutes. Base period service could be provided at intervals ranging from 45 to 60 minutes. The route would serve residential area of Edina and St. Louis Park as well as Normandale Center and Pentagon Park at the south end and Gamble at the northern Terminus.

ROUTE STATISTICS

	Proposed
One-Way Route Miles	7.80
Annual Vehicle Miles	76,880
Annual Vehicle Hours	4,800
Average Speed (mph)	16.0
Average Weekday Adult Revenue Passengers	500
Annual Revenue	$42,730
Annual Cost	$45,870
Operating Ratio (Cost/Revenue)	1.07
Revenue per Vehicle Mile	55.6¢
Cost per Vehicle Mile	59.7¢
Margin per Vehicle Mile	– 4.1¢
Revenue per Vehicle Hour	$ 8.90
Cost per Vehicle Hour	$ 9.56
Margin per Vehicle Hour	–$ 0.66

ROUTE PROPOSALS

SUBURBAN TRANSIT OPERATIONS

SUBURBAN BUS OPERATIONS: PROPOSED ROUTE REVISIONS
BLOOMINGTON BUS COMPANY

Proposed Revisions

- Extend some downtown Minneapolis runs to the University area via the 3rd Avenue Bridge and University Avenue. This route change may not be required if the proposed new route serving Bloomington - University - Columbia Heights becomes operable.

SUBURBAN BUS OPERATIONS: PROPOSED ROUTE REVISIONS
DICKENSON LINES, INC.

Proposed Revisions

None

SUBURBAN BUS OPERATIONS: PROPOSED ROUTE REVISIONS
MEDICINE LAKE BUS COMPANY

Proposed Revisions

- Extend some runs north from 27th Avenue N. along Winnetka Avenue to 45th Avenue N. and then west to Xylon Avenue, south to Rockford Avenue and west along Rockford Avenue to the existing route.

SUBURBAN BUS OPERATIONS: PROPOSED ROUTE REVISIONS
NORTH HENNEPIN TRANSIT COMPANY

Proposed Revisions

- Operate the "Noble Route" south along Winnetka Avenue (as at present) but turn west on 45th Avenue N., south on Xylon Avenue and then east on 42nd Avenue N. to follow the present route.

- Operate some runs of the "St. Croix Route" south to 62nd Avenue N. (as at present) and then west to Boone Avenue and south to 42nd Avenue N. At this point the route would turn east to follow the existing route.

SUBURBAN BUS OPERATIONS: PROPOSED ROUTE REVISIONS
RICHFIELD BUS COMPANY

Proposed Revisions

None

SUBURBAN BUS OPERATIONS: PROPOSED ROUTE REVISIONS
SOUTH AND WEST ST. PAUL TRANSIT COMPANY

Proposed Revisons

- Cease operation and permit TCL to revise routes 5, 7, 8 and 11 to provide service to areas in South and West St. Paul now served by the South and West St. Paul Transit Company. Twin City Lines, Inc. would also operate the Newport-St. Paul Line.

SUBURBAN BUS OPERATIONS: PROPOSED ROUTE REVISIONS
RICE-EDGERTON BUS COMPANY

Proposed Revisions

None